

VII. Plan Performance

This section describes, in general terms, how the proposed Draft 2001 RTP Update meets the performance goals and objectives described earlier in the document.

Regional Performance Goals and Objectives

Mobility and Accessibility

The Draft 2001 RTP Update's performance in terms of mobility and accessibility is depicted in Table 7.1. Mobility is measured primarily in terms of work trip travel time in minutes. PM peak highway speed and percent PM peak travel in delay. PM peak time period is chosen as the criteria for evaluation because it typically represents the worst travel condition in any given 24-hour period. Accessibility is measured as percent of jobs accessible within 25 minutes of travel time by auto mode and 45 minutes of travel time by transit mode.

Table 7.1

Mobility and Accessibility Performance Results				
Performance Indicators	Goal/ Objective	1997 Base Year	2025 Baseline	2025 Plan
MOBILITY – <i>Ease of movement people, goods, and services</i>				
Work Trip Travel Time in Minutes	25	25	38	28
PM Peak Highway Speed	32.6	35	24	30
Percent of PM Peak Travel in Delay	27%	24%	41%	30%
ACCESSIBILITY – <i>Ease of reaching opportunities as measured by the percent of commuters who can get to work within 25 minutes</i>				
Work opportunities within 25 minutes by Auto	88%	88%	75%	80%
45 minutes by Transit	95%	95%	75%	95%

The proposed Draft 2001 RTP Update will improve mobility and accessibility benefits significantly over the Baseline condition. While the work trip travel time and highway PM peak speed objectives may not meet the target threshold of 1990 conditions (goals and objectives), both of these objectives are significant improvements over the Baseline condition. While the proposed Draft 2001 RTP Update does not meet the auto accessibility goal of 88 percent, it represents a significant improvement over the Baseline. The proposed Draft 2001 RTP Update meets the goal for transit accessibility.

Reliability and Safety

Reliability is analyzed for transit and highway separately. Reliability for transit is simply on time performance of the service. Reliability for highway is defined as the probability of reaching a destination within the time that it would take to travel under normal flow speed. Safety analysis is provided only for fatal and injury accidents for all modes.

Table 7. 2

Reliability and Safety Performance Results				
Performance Indicators	Goal/ Objective	1997 Base Year	2025 Baseline	2025 Plan
RELIABILITY – Reasonably dependable levels of service as measured by the percent of on-time arrivals				
Transit	63%	65%	80%	80%
Highway	76%	77%	79%	81%
SAFETY – Transit with minimal risk of accident or injury as measured by reduced accidents				
Fatality Per Million Passenger Miles	0	0.010	0.011	0.011
Injury Accidents	0	0.316	0.317	0.315

As shown in the table above, the proposed Plan is expected to improve reliability and safety of our system significantly over the baseline condition and exceed the prescribed performance objectives.

Cost-Effectiveness/Cost- Benefit Analysis

The purpose of Cost-Effectiveness /Cost Benefit Analysis (CBA) is to facilitate a more efficient allocation of society's scarce resources. Because SCAG, like many other Metropolitan Planning Organizations (MPOs) throughout the nation, is faced with the challenge of expanding transportation investment at a time when financial resources are decreasing, both cost-effectiveness and cost benefit analyses are important.

One component of SCAG's performance indicators for the 2001 RTP Update is a simple cost-effectiveness model. The costs of the 2001 RTP Update is compared to the benefits in the form of a ratio of one dollar spent for a certain amount of dollar benefits. This ratio is provided in both present-value and 1997 constant dollar terms. As indicated in [Table 7. 3](#), for every dollar invested, SCAG's 2001 RTP Update provided \$1.70 return in present value terms and \$3.18 return in constant dollar terms.

Table 7.3

2001 RTP Cost-Benefit Analysis				
Project	Costs (In Billions)	Benefits (In Billions)	Net Benefits (In Billions)	Value of One Dollar Invested
Draft 2001 RTP (Present Value)	\$ 13.1	\$ 22.3	\$ 9.2	\$ 1.70
Draft 2001 RTP (Constant Dollar)	\$ 30.7	\$ 97.8	\$ 67.1	\$ 3.19

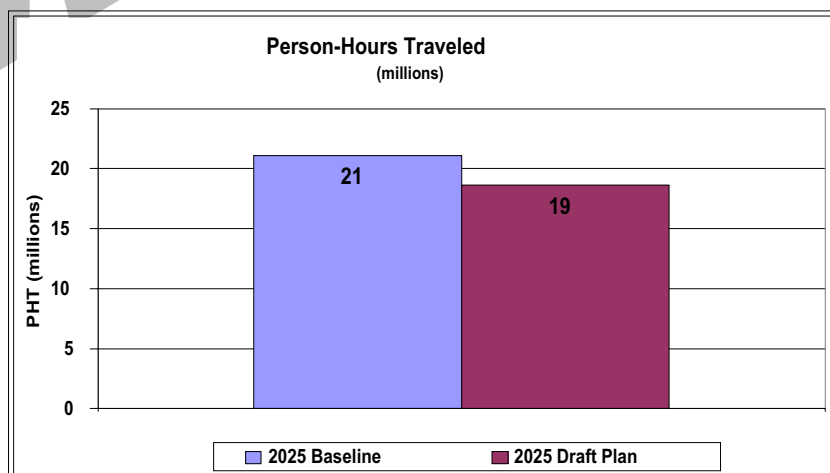
In order to obtain constant dollar measures, cost and benefit values were adjusted for changes in inflation, assuming a 3 percent deflation factor and using a base year of 1997. These constant dollar values were further discounted by the real discount rate of an estimated 5 percent in order to obtain the net present value and in turn, the benefit/cost ratio in present-value terms. Present-values are utilized to compare benefits and costs in different time periods. This method allows comparison of the current value of what the SCAG region would receive in benefits over the life of the 2001 RTP Update if we were to invest in our plan today. The Appendix provides a further discussion concerning the mechanics of discounting.

All benefits assessed are mobility related benefits including delay savings, accident reduction and air quality benefits. Certainly, these effectiveness measures do not capture all of the social benefits of the 2001 RTP Update. For simplicity, however, these three measures were utilized to assess the Draft 2001 RTP Update benefits. SCAG derived each effectiveness measure by assessing the difference between the 2025 baseline and the 2025 plan. Assumed monetary values for each of these effectiveness measures are further discussed in the Appendix.

Figure 7.1

In addition to the cost-benefit analysis, [Figure 7.1](#) provides the results of a cost-effectiveness analysis (CEA) in terms of a cost per unit of outcome effectiveness. This CEA does not assume monetary values of benefits; rather, it involves two different metrics: cost in constant dollars and an effectiveness measure. In

this case, the effectiveness measure is the difference in person hours traveled (PHT) between the 2025 baseline and the 2025 plan. A ratio in the form of cost/effectiveness (C/E) is calculated based upon the change in person hours traveled (see [Figure 7.1](#)). Accordingly, CEA results indicate that it costs \$3.68 to reduce each person hour traveled.



Transportation Conformity Analysis and Findings

Under EPA's Transportation Conformity Rule requirements SCAG's Draft 2001 RTP needs to pass four tests: 1) the Regional Emission Analysis; 2) the Timely Implementation of TCMs; 3) the Financial Constraint Determination; and 4) Interagency Consultation and Public Involvement.

Regional Emissions Analyses

EPA's Transportation Conformity Rule requires that the Draft 2001 RTP regional emissions be consistent with the motor vehicle emissions budgets in the applicable SIPs. Consistency with emissions budgets must be demonstrated for each year for which the applicable emissions budgets are established, for the transportation planning horizon year, and for any milestone years as necessary so that the years for which consistency is demonstrated are no more than ten years apart.

The Draft 2001 RTP - Regional Emissions Analyses, must meet all of the following requirements for conformity finding:

- For the budget test, the regional emissions must be equal or less than the emission budgets.
- For the PM₁₀ build/no-build test, the build scenario's emission must be less than the no-build scenario's emissions.
- For the ozone or CO build/no-build test, the build scenario's emission must be less than the no-build scenario's emission and additionally the future year emissions must be less than the 1990 base year emissions.

The build scenario means implementing the RTP and the no-build scenario means not implementing the RTP.

A summary of the regional emissions analysis is reflected in Table 7.4.

Table 7.4

Summary of Regional Emissions Analyses							
Ozone Emissions Analysis (tons/day)							
Summer Temperatures							
SCAB (Excluding Banning Pass)							
Ozone Precursor		2002	2005	2008	2010	2020	2025
ROG (VOC)	Budget	273.10	206.03	145.35	80.74	80.74	80.74
	2001 RTP	265.96	199.23	142.07	79.36	48.02	45.31
NO _x	Budget	447.12	369.11	310.08	277.76	277.76	277.76
	2001 RTP	443.63	358.19	282.43	251.77	235.67	239.16
Regional emissions budget generated using EMFAC 7G. To pass, RTP emission must be equal or less than budget							
NO _x Emissions Analysis (tons/day)							
Winter Temperatures							
SCAB (Excluding Banning Pass)							
NO2 Precursor		1994	2000	2010	2020	2025	
NO _x	Budget	657.30	657.30	657.30	657.30	657.30	
	2001 RTP	--	574.56	377.99	360.98	367.72	
Regional emissions generated using EMFAC 7G. To pass, RTP emission must be equal or less than budget.							
CO (tons/day)							
Winter Temperatures							
SCAB (Excluding Banning Pass)							
CO		1990	2000	2010	2020	2025	
Build				1,823.34	1,449.20	1,468.38	
No Build		7,380.76	3,464.84	1,838.92	1,477.96	1,501.56	
Regional emissions generated using EMFAC 7G. To pass, build emissions must be less than no build and 1990,							
PM ₁₀ (tons/day)							
Winter Temperatures							
SCAB (Excluding Banning Pass)							
PM ₁₀ Precursor		1990	2000	2010	2020	2025	
ROG (VOC)		861.38	346.75	143.79	89.41	85.22	
NO _x		889.73	557.12	373.57	352.12	359.11	
To pass, the future year emissions must be less than 1990.							
Primary Particulate Matter		1990	2000	2010	2020	2025	
Build				221.197	249.741	264.840	
No Build				224.559	255.312	269.915	
Regional emissions generated using EMFAC 7G. To pass, build emissions must be less than no build and 1990.							

Ozone (tons/day) Summer Temperatures SCCAB - Ventura County							
Ozone Precursor		1999	2002	2005	2010	2020	2025
ROG (VOC)	Budget	16.2	12.47	9.82	9.82	9.82	9.82
	2001 RTP		11.54	9.55	5.87	4.71	3.12
NOx	Budget	27.04	24.36	21.33	21.33	21.33	21.33
	2001 RTP		22.86	19.29	13.71	14.18	13.66
Regional emissions generated using EMFAC 7G. To pass, RTP emission must be equal or less than budget.							

PM ₁₀ (tons/day) Annual Average Temperatures MDAB (San Bernardino County - excluding Searles Valley)				
	2000	2010	2020	2025
Build		15.982	19.651	21.450
No-build		15.986	20.104	21.806
Regional emissions generated using EMFAC 7F. To pass, build emission must be less than no-build and 1990.				

Ozone (tons/day) Summer Temperatures MDAB/SSAB * (Southeast Desert Modified Area)							
MDAB /	SSAB (*)	2002	2005	2007	2010	2020	2025
ROG	Budget	31.07	26.45	23.31	23.31	23.31	23.31
	2001 RTP	18.73	16.10	14.07	11.39	10.23	7.58
NO _x	Budget	65.79	57.06	54.82	54.82	54.82	54.82
	2001 RTP	44.78	39.27	36.46	32.57	38.88	38.96
Regional emissions generated using EMFAC 7F. To pass, RTIP emission must be equal or less than budget.							
*Note: This federally designated Ozone non-attainment area covers three separate but contiguous areas: the Antelope Valley portion of MDAB, the San Bernardino County portion of MDAB, and the Coachella Valley (including Banning Pass) portion of SSAB. The conformity analyses for the NO _x and ROG are based on comparing SCAG's regional transportation emissions with the combined budgets of the three parts. The Coachella Valley and Antelope Valley's emissions budgets are reflected in SCAQMD's 1994 AQMPs/SIPs and the San Bernardino County emissions budgets are reflected in the MDAQMD 1994 AQMP/SIP.							
PM ₁₀ (tons/day) Annual Average Temperatures Riverside County (Coachella Valley including Banning Pass) SSAB							
PM ₁₀	2000	2010	2020	2025			
Build		10.507	15.877	17.485			
No-build		10.586	15.988	17.687			
Regional emissions generated using EMFAC 7F. To pass, build emission must be less than no-build.							

Ozone (tons/day) Summer Temperatures Imperial County						
SSAB /	(Imperial)	1990	2000	2010	2020	2025
ROG	Build					
	No-build					
NO _x	Build					
	No-build					
Regional emissions generated using EMFAC 7F. To pass, build emission must be less than the 1990 base year or the no-build.						

PM ₁₀ (tons/day) Annual Average Temperatures Imperial County				
PM ₁₀	2000	2010	2020	2025
Build				
No-build				
Regional emissions generated using EMFAC 7F. To pass, build emission must be less than no-build.				

Conformity Determinations and Findings

Regional Emissions Test

SCAG has determined the following conformity findings for the Draft 2001 RTP Update under the required Federal tests:

- SCAG's RTP regional emissions for Ozone precursors are consistent with all applicable emissions budgets for all milestone, attainment and planning horizon years for the following areas:
 - SCAB; the 1997 ozone SIP
 - SCCAB (Ventura County); the 1992 ozone SIP
 - MDAB (Antelope Valley and San Bernardino County) / SSAB (Coachella Valley – including Banning Pass); the 1994 ozone SIP
- SCAG's Draft 2001 RTP Update regional emissions for NO_x precursor are consistent with all applicable emissions budgets for all milestone, attainment and planning horizon years for the SCAB (the 1997 ozone SIP)
- SCAG's Draft 2001 RTP Update regional emissions (build scenarios) for the CO are less than no-build emissions and the future years are less than the 1990 base year emission for all milestone, attainment and planning horizon years.
- SCAG's Draft 2001 RTP Update regional emissions (build scenarios) for the PM₁₀ are less than the no build emission for the following areas:
 - SSAB (Coachella Valley – including Banning Pass)
 - MDAB (San Bernardino County – excluding Searles Valley)

Timely Implementation of TCM Test

The TCM1 project categories listed in the 1997 ozone SIP/AQMP for the SCAB are given funding priority and are on schedule for implementation.

The TCM strategies listed in the 1994 ozone SIP/AQMP for the VC/SCCAB are given funding priority and are on schedule for implementation.

Financial Constraint Test

All projects and programs listed in the Draft 2001 RTP Update are financially constrained. Detailed information on the financial analysis is included in the Appendix.

Transportation Conformity Report

The transportation conformity analyses for the Draft 2001 RTP Update for the SCAG region (with the exception of Imperial County) have been completed and show positive conformity findings. The Imperial County conformity analysis and findings are being completed and will be incorporated into the Transportation Conformity Report which will be available for review shortly after the release of this Draft 2001 RTP Update. This report provides detailed information on all associated procedures and methods utilized in conformity analyses and findings of the Draft 2001 RTP Update.

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Environmental Justice

Environmental justice analyses conducted for the Draft 2001 RTP Update attempt to demonstrate that the Plan will not result in disproportionate adverse impacts on low-income and minority populations in the SCAG region. The analyses conducted were: accessibility, congestion, traffic safety, noise and air quality.

Accessibility

A preliminary analysis was conducted to assess the effects of the Draft 2001 RTP Update on accessibility to opportunities in the region, broken down by income and ethnic groups. Accessibility to opportunity, for purposes of the analysis, is defined as the percentage of the region's jobs accessible within 30 minutes by auto, or within 45 minutes by transit. The analysis is further subdivided to show accessibility via low-cost transit, such as city bus and light rail, versus accessibility via any type of transit, including higher-cost commuter rail or potential high-speed rail systems. While these last two categories do not correspond directly to income groups, one might expect that low-income travelers will tend to choose low-cost transit.

The results shown below are based on regional transportation modeling outputs, which were aggregated from traffic analysis zone (TAZ) level data. They are also based on SCAG's 2025 forecasts of population, demographics (including ethnicity and income distributions) and employment as discussed elsewhere in this Draft 2001 RTP Update. The analysis examined jobs available in the service and retail sectors, which are frequently entry-level jobs, as well as total jobs. Retail and service employment can also serve as indicators of accessibility to services, which was not analyzed separately from accessibility to jobs in this study.

The Draft 2001 RTP Update will generally provide modest improvements in accessibility to employment (and, by implication, to services) to all people in the region, regardless of ethnic or income group. Results for income quintiles, presented in [Table 7.5](#) show that all income groups will benefit to approximately the same extent (roughly 6 percent), when taking advantage of all possible modes of travel. In other words, the 2001 RTP Update would generally mean that approximately 6 percent more jobs would be accessible, region-wide, than if the plan were not adopted. [Table 7.5](#) also presents the results by ethnic group and likewise shows that there are not dramatic differences between ethnic groups in the gains due to 2001 RTP Update.

Results are better for that small segment of the population that depends on low-cost transit to access jobs and services. The preliminary results, as shown in [Table 7.5](#), indicate that this segment – which is likely to belong to the lowest income quintiles but may include representatives of all ethnic groups – will benefit substantially more than average from adoption of the 2001 RTP Update. Gains in accessibility due to the 2001 RTP Update for those who are dependent on low-cost transit will range from a low of 14 percent to a high of 38 percent, compared to the baseline. These gains reflect the new flexibility in local and

regional travel that will come from low-fare feeder shuttle buses accompanying the proposed high-speed rail system.

However, it should be noted that the absolute accessibility to jobs for those who are dependent on low-cost transit will still be quite low, increasing from an estimated 2.2 percent of the region's jobs without the Plan to 2.8 percent with the 2001 RTP Update (see summary Table 7. 6). As shown in this summary table, those who can take advantage of all forms of transit would enjoy the most dramatic increases in accessibility, about 130 percent overall, due to the 2001 RTP Update. Even this gain represents an increase in absolute accessibility to only 7.8 percent of the region's jobs within a 45 minute trip, up from approximately 3.4 percent. This compares with auto users' overall accessibility to an estimated 15.2 percent of the region's jobs within 30 minutes, though this is approximately only a 6 percent improvement over the baseline.

Table 7. 5

Accessibility Gains Due to Draft 2001 RTP Update <i>(expressed as percentage increase over baseline in the following statistic: Percent of region's jobs accessible within 30 minutes by car or 45 minutes by transit)</i>			
All Modes of Travel Combined			
Income Quintile	Retail Jobs	Service Jobs	All Jobs
I (lowest)	6.4%	6.6%	6.5%
II	6.3%	6.5%	6.4%
III	6.2%	6.3%	6.3%
IV	5.9%	6.1%	6.0%
V	5.5%	5.8%	5.7%
All	5.9%	6.2%	6.1%
Ethnic Group			
White	5.6%	5.8%	5.8%
African-American	5.9%	5.8%	5.6%
Native-American	6.1%	6.2%	6.2%
Asian/Pac. Islander	5.9%	6.2%	6.1%
Other	6.1%	6.2%	6.0%
Latino	6.3%	6.5%	6.4%
By Low-Cost Transit Within 45 Minutes			
Income Quintile	Retail Jobs	Service Jobs	All Jobs
I (lowest)	29.1%	27.0%	27.5%
II	29.1%	27.1%	27.6%
III	28.8%	26.5%	27.1%
IV	28.7%	26.5%	27.0%
V	29.8%	27.9%	28.3%
All	29.1%	27.0%	27.5%
Ethnic Group			
White	20.0%	13.8%	14.0%
African-American	22.7%	23.2%	23.7%
Native-American	20.1%	25.6%	16.2%
Asian/Pac. Islander	30.6%	27.6%	29.0%
Other	36.8%	37.0%	38.4%
Latino	31.5%	30.7%	30.7%

Table 7.6

Summary of Accessibility Analysis Results					
Percentage of Region's Jobs Accessible within 30 min. by Auto or 45 min. by Transit					
Income Quintile	I (below \$15,949)	II \$15,950 - \$29,730	III \$29,731 - \$44,744	IV \$44,745 - \$68,399	V \$68,400 and up
All Modes of travel					
2025 Baseline	13.8%	13.9%	13.8%	13.9%	15.0%
2025 Plan	14.7%	14.8%	14.7%	14.7%	15.8%
Percent Gain	6.5%	6.4%	6.3%	6.0%	5.7%
By low-cost transit within 45 minutes					
2025 Baseline	2.20%	2.20%	2.20%	2.19%	2.19%
2025 Plan	2.81%	2.81%	2.79%	2.78%	2.81%
Percent Gain	27.5%	27.6%	27.1%	27.0%	28.3%
Summary of Results by Mode					
Mode	Auto (30 min)	Low-Cost Transit (45 min)		All Transit (45 min)	All Modes
2025 Baseline	14.3%	2.19%		3.39%	14.2%
2025 Plan	15.2%	2.80%		7.84%	15.0%
Percent Gain	6.2%	27.5%		131%	6.1%
Summary of Results by Income					
By any transit within 45 minutes					
Income Quintile	Retail Jobs	Service Jobs		All Jobs	
I (lowest	153%	142%		131%	
II	153%	142%		131%	
III	153%	141%		130%	
IV	153%	141%		131%	
V	154%	143%		133%	
All	153%	142%		131%	

Congestion

SCAG's regional transportation modeling estimates the improvements in total daily congestion delay resulting from the Draft 2001 RTP Update. The initial environmental justice analysis of congestion entailed a simple comparison of the improvement expected in each county, with the projected 2025 demographic make-up of each county. A further analysis will be conducted at the TAZ level once data is available.

Figure 7.2 shows the household income distribution projected for 2025 by county, and for the region as a whole. The income categories are quintiles: a term meaning that one-fifth (or 20 percent) of households fall in each category regionwide -- as can be seen on the chart for the SCAG region. The distributions vary for each county, however: while Los Angeles County has a fairly even income distribution, Ventura and Orange counties both show a higher concentration of high-income households, while Riverside and San Bernardino counties are more heavily weighted towards the four lower-income quintiles. (Income distributions for 2025 are based on the income distribution in the 1990 Census, the most recent available data.)

As shown in Table 7.7, the counties that will enjoy the greatest reduction in congestion from the Draft 2001 RTP Update are Los Angeles, Riverside, and San Bernardino. Ventura and Orange Counties, with the largest concentration of high-income residents, are not projected to experience the largest share of traffic congestion reduction due to the Plan.

Table 7.8 summarizes the projected minority (non-white) percentage by county in 2025. Los Angeles County is projected to have the greatest minority population – 79 percent -- in the 2001 RTP Update year. San Bernardino and Orange counties will be next, with 66 percent and 63 percent, respectively. Riverside and Ventura are projected to have the region's smallest percentage of minority populations in 2025, with 58.5 percent and 52 percent, respectively. Los Angeles County, with a higher percentage of non-white residents than the region as a whole, will experience an improvement in congestion levels (24 percent) similar to that for the entire SCAG region (24.8 percent). The other counties are all projected to have smaller percentage of minorities than for the region as a whole, though the amount of congestion improvements is sometimes less, sometimes more than the projected regional improvement of 24.8 percent.

Figure 7.2

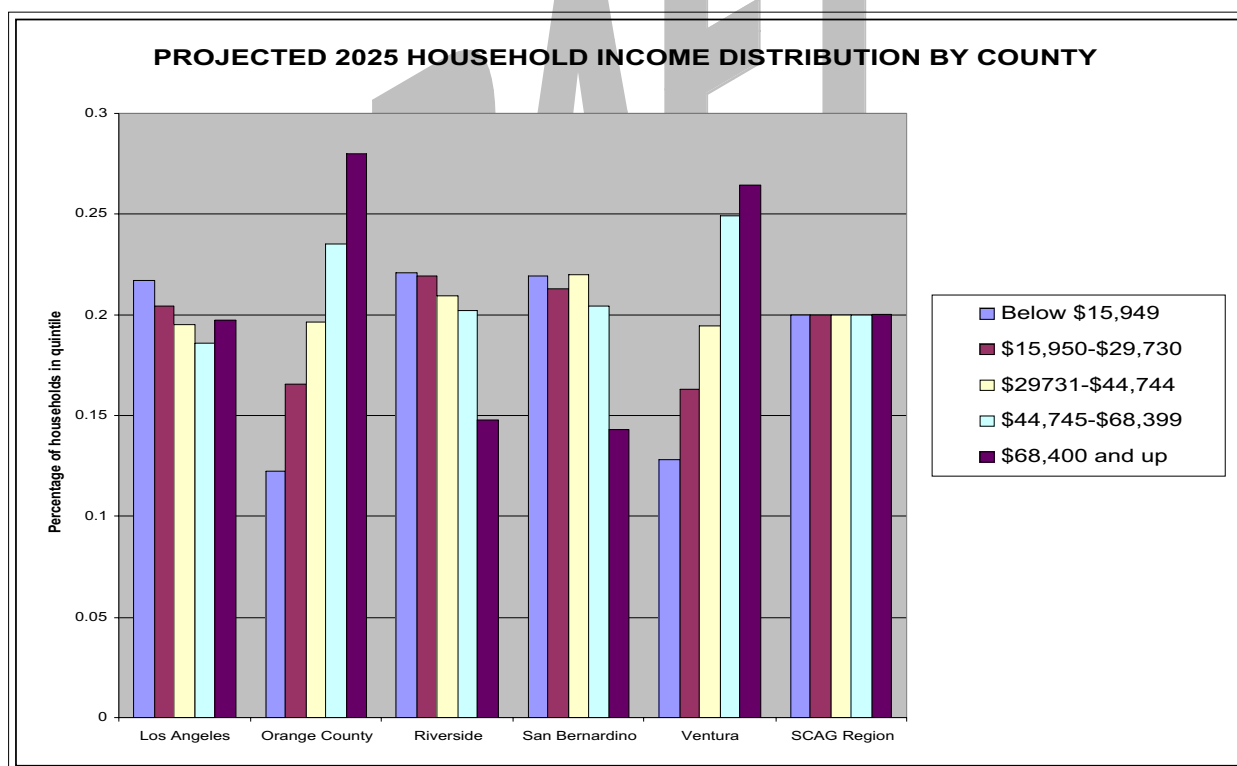


Table 7.7

Daily Congestion Delay in Hours by County				
County	2025 Baseline	2025 Draft Plan	Reduction	% Change
Imperial*				
Los Angeles	2,338,436	1,776,618	561,818	-24.0%
Orange	378,415	345,075	33,340	-8.8%
Riverside	636,424	446,454	189,970	-29.8%
San Bernardino	471,962	290,063	181,899	-38.5%
Ventura	80,588	79,379	1,209	-1.5%
SCAG*	3,905,825	2,937,589	968,236	-24.8%

*Data for Imperial County not yet available.

Table 7.8

2025 Projected Ethnicity by County		
County	% White	% Non-White
Imperial*		
Los Angeles	21.0%	79.0%
Orange	37.2%	62.8%
Riverside	41.5%	58.5%
San Bernardino	33.9%	66.1%
Ventura	48.2%	51.8%
SCAG*	28.8%	71.2%

*Data for Imperial County not yet available.

Traffic Safety

The risk of injury or fatality due to traffic accidents is related to vehicle miles traveled (VMT) – that is, the more miles one drives, the higher one's risk of injury or death. The Draft 2001 RTP Update is expected to reduce traffic injuries and to result in no appreciable change in traffic fatalities. Improvements in safety due to the 2001 RTP Update should be enjoyed by members of all income and ethnic groups in proportion to their numbers in the region.

The risk to pedestrians likewise depends on the amount of walking, as well as the places where people walk. A September 2000 report by the Surface Transportation Policy Project, *Dangerous By Design*, examined pedestrian safety in Southern California.¹⁴ The report states that pedestrian fatalities account for 20 percent of all traffic deaths statewide, even though only 8 percent of trips are taken on foot. Moreover, the report found that low-income and minority persons are more likely to be victims of pedestrian accidents. These people may walk more often because of the lack of a car; the report also points out that affordable housing may more often be found on high-traffic streets.

¹⁴ See <http://www.transact.org/ca/design/default.htm>.

While pedestrian safety was not analyzed in this 2001 RTP Update, the extensive expenditures to improve the region's transit system, including low-cost shuttle buses, and substantial investments in pedestrian and bicycling facilities, should provide new alternatives to traveling on foot and ultimately reduce the toll on pedestrians. Additional steps are encouraged at the local level (e.g., tighter speed limit enforcement, installation of stop lights, signs, pedestrian bridges, and speed bumps, or traffic calming measures).

Noise

The environmental justice noise analysis will examine two sources of noise: highway noise and aviation noise. The results of these analyses will be available at the time of release of the Environmental Impact Report for the Draft 2001 RTP Update.

Air Quality

SCAG's air quality analysis is based on projected pollutant emissions arising from mobile sources under the 2001 RTP Update. Ideally, the analysis should take into account how these emissions travel and disperse through the region when subject to weather patterns. However, this type of analysis is beyond the capabilities of SCAG at this time. Therefore, emission levels are used as an approximate indicator of personal exposure to pollution under the Plan as compared to the Baseline.

The changes in pollutant emissions (for reactive organic gases [ROG], nitrogen dioxide [NO_x], carbon monoxide [CO], particulate matter [PM₁₀], and sulfur dioxide [SO_x]) as a result of the Draft 2001 RTP Update were estimated using SCAG's regional transportation model and the Direct Travel Impact Model (DTIM). Changes in pollutant emissions were identified for the region as a whole as well as on a county-by-county basis. [Table 7.9](#) summarizes these expected emissions changes as a percentage change between the Plan and Baseline conditions. All counties in the region will experience an improvement in air quality under the Plan, except for NO_x emissions, which are projected to increase in the inland counties.

Table 7.9

Comparison of Emissions 2025 RTP vs. 2025 Baseline (by county)					
County	ROG % Change	NO _x % Change	CO % Change	PM ₁₀ % Change	SO _x % Change
Imperial*					
Los Angeles	-4.43%	-0.74%	-3.10%	-1.84%	-1.85%
Orange	-1.61%	-0.88%	-1.37%	-1.52%	-1.51%
Riverside	-5.54%	1.78%	-4.06%	-1.71%	-1.71%
San Bernardino	-3.16%	3.54%	-0.76%	-1.00%	-1.02%
Ventura*					
SCAG	-3.97%	0.40%	-2.63%	-1.63%	-1.66%
*Data for Imperial and Ventura Counties not yet available.					

Therefore, all income and ethnic groups also would experience a reduction in all pollutant emissions except for NOx as a result of the 2001 RTP Update. Further analysis will be conducted on the distribution of significant emissions increases as the TAZ level when data becomes available.

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